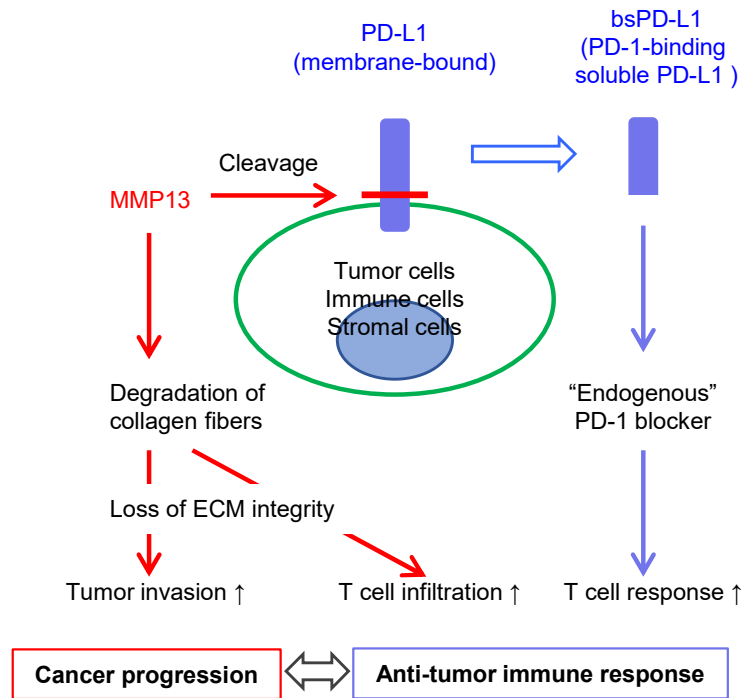


Supplementary Figure 4



Schematic model of the regulation of the tumor microenvironment by bsPD-L1 and MMP13 in GC patients. MMP13 cleaves membrane-bound PD-L1 to generate bsPD-L1. bsPD-L1 binds to PD-1 and functions as an endogenous PD-1 blocker. MMP13 degrades collagen fibers in tumor tissue, resulting in loss of extracellular matrix (ECM) integrity, which causes tumor invasion as well as T cell infiltration. The balance between the anti-tumor immune response and cancer progression is important for prognosis of GC patients. High levels of MMP13 promotes tumor invasion rather than T cell response, leading to poor prognosis.